

MEF Carrier Ethernet Exam Blueprint (2018)

| Section/Objective | | Percentage Weights |
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| 1 | SERVICES AND ATTRIBUTES | 27.50% |
| 1.01 | Understand and define external interfaces, UNI and ENNI. | |
| 1.02 | Understand and define EVCs and OVCs and their types. | |
| 1.03 | Understand the details and characteristics of the EVC-based services (ELINE: EPL, EVPL, E-LAN: EP-LAN, EVP-LAN, E-TREE: EP-TREE, EVP-TREE). | |
| 1.04 | Understand the details and characteristics of the OVC-based services (O-LINE, O-LAN, O-TREE) and their partitioning into E-ACCESS and E-TRANSIT services. Understand the purpose and important attributes of the Access EPL and Access EVPL services. | |
| 1.05 | Know the organization of the service attributes for EVC-based services, and understand, describe, and apply important service attributes for EVC-based services. | |
| 1.06 | Understand, describe, and apply important service attributes for OVC-based services and the concepts associated with composing EVCs from OVCs. | |
| 1.07 | Understand the usage of the EVC and OVC-based services and how they can be applied to solve customer problems. | |
| 1.08 | Understand the categories of Service Frames: Data, L2CP, and SOAM. | |
| 1.09 | Understand and apply the principles associated with Layer 2 Control Protocol (L2CP) processing and what happens at an L2CP Decision Point. | |
| 1.1 | Understand, describe, and apply hairpin switching and OVC endpoint map bundling. | |
| 2 | CLASS OF SERVICE AND TRAFFIC MANAGEMENT | 16.25% |
| 2.01 | Understand and define Class of Service Names and Class of Service Labels. | |
| 2.02 | Understand and describe how Service Frames and ENNI frames can be marked for class of service and color. | |
| 2.03 | Understand Performance Tiers and CoS Performance Objectives. | |
| 2.04 | Understand and apply the MEF Bandwidth Profile (BWP) Algorithm and the BWP parameters CIR, CBS, CIRMAX, EIR, EBS, EIRMAX, CF and CM. | |
| 2.05 | Understand, describe, and apply how Bandwidth Profile Flows are assigned to Envelopes and how the BWP parameters interact within an Envelope. | |
| 2.06 | Understand and describe the application of Bandwidth Profiles to Ethernet Services for both Ingress and Egress. | |
| 3 | SERVICE OAM | 16.25% |
| 3.01 | Understand and describe basic components of the SOAM infrastructure: Maintenance Entity (ME), ME Group (MEG), ME Endpoint (MEP), ME Intermediate Point (MIP), MEG Level. | |
| 3.02 | Understand, describe, and apply the messages and indications of SOAM Fault Management - CCM, LBM/R, and LTM/R, RDI, AIS, LCK, TST. | |
| 3.03 | Understand the SLS and the Performance Metrics defined for EVCs and OVCs. | |
| 3.04 | Understand, describe, and apply the mandatory SOAM Performance Management solution - PM1 (DMM/R and SLM/R). | |
| 3.05 | Understand the optional PM solutions and how they differ from PM1 (1DM and LMM/R). | |
| 3.06 | Know the names and scope of the MEF-defined Maintenance Entities (UNI, ENNI, Operator, Service Provider, EVC, Test, Subscriber). | |
| 4 | INFRASTRUCTURE, OPERATIONS, AND APPLICATIONS | 16.25% |
| 4.01 | Know the primary transport technologies used to implement Carrier Ethernet (Ethernet Bridging, MPLS, Optical) and their characteristics in terms of scalability and their ability to carry different service types. | |
| 4.02 | Understand the application of various protection mechanisms such as Link Aggregation, Spanning Tree, ITU-T G.8032, and ITU-T G.8031 | |
| 4.03 | Understand the primary characteristics of the access technologies that can be used to access a UNI (Fiber, PDH, HFC, DSL, Wireless). | |
| 4.04 | Understand the concept of Service Lifecycle and important phases of the Service Lifecycle: Configuration, Service Activation Testing, Fault and Performance Monitoring | |

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| 4.05 | Understand the major components of a Service Activation Test (SAT) and how they are used. | |
| 4.06 | Understand the purpose, basic operation, and Ethernet Service requirements of Circuit Emulation Services over Ethernet. | |
| 4.07 | Understand and describe how Carrier Ethernet is used in Mobile Backhaul (MBH) Networks. | |
| 4.08 | Understand and describe the three types of synchronization used in Mobile Backhaul Networks (Frequency, Phase, Time). | |
| 4.09 | Understand and describe the capabilities and uses of Synchronous Ethernet and IEEE 1588 (PTP). | |
| 4.2 | 4.10 Understand and describe the Class of Service and Service OAM requirements defined in the Mobile Backhaul Implementation Agreement. | |
| 5 | ETHERNET, MEF BASICS, AND MEF CERTIFICATION | 11.25% |
| 5.01 | Know the basic structure of the MEF organization. | |
| 5.02 | Know the three types of technical documents produced by the MEF technical committees. | |
| 5.03 | Know and understand the requirements and benefits for Equipment and Service Provider certification. | |
| 5.04 | Understand the basic structure and requirements of the CE2.0 certification tests. | |
| 5.05 | Understand and apply the definitions of Subscriber, Service Provider, Network Operator, CEN, SLA, and SLS. | |
| 5.06 | Know which IEEE standards define the Ethernet Frame format and VLAN tags and be able to Identify and understand the structure and fields of an Ethernet Frame (untagged, single tagged, and double tagged) and the types of Ethernet addresses (Broadcast, Multicast, and Unicast.) | |
| 5.07 | Understand and apply the basic operation of an Ethernet Bridge including the functions of Learning, Flooding, Forwarding and Discarding. | |
| | RANDOM POOL (All Areas) | 12.50% |
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| | Total | 100.00% |